

M.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2023

Third Semester

Microbiology

MEDICAL AND PHARMACEUTICAL
MICROBIOLOGY

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Organ of defense in protozoans is _____.
- (a) Statocysts
- (b) Trichocysts
- (c) Otocysts
- (d) Nematocysts

6. How does Ebola spread from human to human?
- (a) Spreads through direct contact with blood and body fluids
- (b) Spreads through inhaling infected droplets
- (c) Spreads through contaminated water
- (d) None of the above.

7. *Salmonella typhi* and *S Paratyphi* are the two major pathogens that cause enteric fever. Which of the following are not possible specimens taken for the routine diagnosis of the disease?

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|------------|------------|
| (a) Blood | (b) Sputum |
| (c) Faeces | (d) Urine |

8. What are the common types of poor health conditions that have been associated with the imbalance and changes in the gut micro flora?

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|-----------------|--------------------|
| (a) Overweight | (b) Mental stress |
| (c) (a) and (b) | (d) Road accidents |

9. Test for sterility is intended to detect the presence of _____.

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| (a) Dust particles |
| (b) Particulate impurity |
| (c) Viable microorganism |
| (d) Chemical impurity |

2. Amoebiasis is caused by _____.
- (a) *Toxoplasma gondii*
- (b) *Entamoeba histolytica*
- (c) *Ascaris lumbricoides*
- (d) *Treponema*

3. Entamoeba histolytica can be cultured in _____

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| (a) Diamonds medium |
| (b) CLED medium |
| (c) NNN medium |
| (d) Mac Conkey agar |

4. The malignant tertian malaria is caused by _____.

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| (a) <i>Plasmodium malariae</i> |
| (b) <i>Plasmodium ovale</i> |
| (c) <i>Plasmodium falciparum</i> |
| (d) <i>Plasmodium vivax</i> |

5. The 1918 flu pandemic, also called the Spanish flu was caused by _____.

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| (a) H1N1 influenza A virus |
| (b) SARS corona virus 2 |
| (c) Influenza C virus |
| (d) Simian virus 5 |

10. Sterility testing can be done by using?

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| (a) Direct inoculation method |
| (b) Membrane filtration method |
| (c) Pyrogen Test |
| (d) All of these |

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Define lower respiratory tract infections, and add a note on its Etiology, transmission and prophylaxis.

Or

- (b) Illustrate the urinary tract infection – describe the pathogens involved and lab diagnosis.

12. (a) Draw a neatly labelled picture and explain the structure, etiology, transmission and clinical manifestation of rabies.

Or

- (b) Describes the staining methodology of *Microbacterium leprae* and add a note on lab diagnosis and prophylaxis.

13. (a) Define H1N1 influenza and add note on lab diagnosis, treatment and prophylaxis.

Or

(b) Define Zika. Add note on lab diagnosis, treatment and prophylaxis.

14. (a) Examine the antimicrobial testing by Kirby bauer method.

Or

(b) Distinguish MIC and MBC.

15. (a) Give examples of sterility testing of pharmaceutical products.

Or

(b) List out the importance of sterility test in pharmaceuticals.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe the life cycle of *Entamoeba histolytica*. Add note on transmission, pathogenicity, treatment and preventive measures.

Or

(b) Write an essay on Rota viruses.

Page 5 Code No. : 5548

17. (a) Distinguish the 2 different stages of life cycle of malaria parasite — Add a note on the clinical signs and symptoms, treatments and prophylaxes.

Or

(b) Write a detailed account on Tetanus.

18. (a) Discuss the anticipation of the origin of Covid - 19 and add a note on the transmission, symptoms, and its mutant strains.

Or

(b) Elaborately explain the emerging infectious disease - Avian Flu.

19. (a) Write an essay on pyrogen testing.

Or

(b) Define drug resistance, add a note on its importance and antigenic properties.

20. (a) Write an account on sterility testing of sterile surgical devices.

Or

(b) Discuss and compare the importance of sterility tests.

Page 6 Code No. : 5548